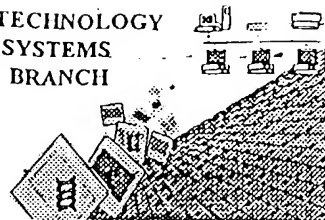


RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/679,580

Source: IFWB

Date Processed by STIC: 10/27/03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/2003):
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/2003

RAW SEQUENCE LISTING

DATE: 10/27/2003

PATENT APPLICATION: US/10/679,580

TIME: 10:39:26

Input Set : A:\224378.ST252.txt

Output Set: N:\CRF4\10272003\J679580.raw

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62 Gln Leu Lys Gly Leu Glu Asp Thr Lys Ser Pro Gln Phe Asn Arg Tyr
63      85      90      95
65 ttt tat tta tta gag aat tta gct tgg gtt aaa tca tat aac atc tgc 573
66 Phe Tyr Leu Leu Glu Asn Leu Ala Trp Val Lys Ser Tyr Asn Ile Cys
67      100      105      110
69 ttt gaa ttg gaa gat tgc aat gaa att ttt att cag ctt ttt aga act 621
70 Phe Glu Leu Glu Asp Cys Asn Glu Ile Phe Ile Gln Leu Phe Arg Thr
71 115      120      125      130
73 ctg ttc tca gtg atc aac aat agc cac aat aag gta caa atg cac 669
74 Leu Phe Ser Val Ile Asn Asn Ser His Asn Lys Lys Val Gln Met His
75      135      140      145
77 atg cta gat ttg atg agt tct atc atc atg gaa ggt gat gga gtt act 717
78 Met Leu Asp Leu Met Ser Ser Ile Ile Met Glu Gly Asp Gly Val Thr
79      150      155      160
81 caa gaa tta ttg ggc tcc att ctt att aac ctc att cct gca cat aag 765
82 Gln Glu Leu Leu Gly Ser Ile Leu Ile Asn Leu Ile Pro Ala His Lys
83      165      170      175
85 aac tta aat aaa cag tcc ttt gac ctt gca aaa gtg cta ttg aaa aga 813
86 Asn Leu Asn Lys Gln Ser Phe Asp Leu Ala Lys Val Leu Leu Lys Arg
87      180      185      190
89 aca gtc cag act att gag gca tgc att gcc aat ttt ttc aat caa gtc 861
90 Thr Val Gln Thr Ile Glu Ala Cys Ile Ala Asn Phe Phe Asn Gln Val
91 195      200      205      210
93 ctg gtg ctg gga aga tca tca gta agt gat ttg tca gaa cat gta ttt 909
94 Leu Val Leu Gly Arg Ser Ser Val Ser Asp Leu Ser Glu His Val Phe
95      215      220      225
97 gat ctg att cag gaa ctt ttt gct ata gat cct cat tta tta tta tcc 957
98 Asp Leu Ile Gln Glu Leu Phe Ala Ile Asp Pro His Leu Leu Leu Ser
99      230      235      240
101 gtc atg cca cag ctt gaa ttc aaa cta aag agc aat gat gga gaa gag 1005
102 Val Met Pro Gln Leu Glu Phe Lys Leu Lys Ser Asn Asp Gly Glu Glu
103      245      250      255
105 cga tta gct gtt gtt cga ctt cta gct aaa ttg ttt ggc tcc aaa gat 1053
106 Arg Leu Ala Val Val Arg Leu Leu Ala Lys Leu Phe Gly Ser Lys Asp
107      260      265      270
109 tct gat ttg gca aca cag aat cgt cct ctt tgg caa tgt ttt ctt gga 1101
110 Ser Asp Leu Ala Thr Gln Asn Arg Pro Leu Trp Gln Cys Phe Leu Gly
111 275      280      285      290
113 cga ttt aat gat att cat gtt cct gtg aga tta gaa agt gtg aaa ttt 1149
114 Arg Phe Asn Asp Ile His Val Pro Val Arg Leu Glu Ser Val Lys Phe
115      295      300      305
117 gcc agt cat tgt tta atg aat cac cca gat tta gcg aag gat ctc aca 1197
118 Ala Ser His Cys Leu Met Asn His Pro Asp Leu Ala Lys Asp Leu Thr
119      310      315      320
121 gaa tat tta aag gtt aga tca cat gat cca gaa gaa gct att cgt cat 1245
122 Glu Tyr Leu Lys Val Arg Ser His Asp Pro Glu Glu Ala Ile Arg His
123      325      330      335
125 gat gtc att gtt act ata aca gct gcc aag agg gac ctg gcc tta 1293
126 Asp Val Ile Val Thr Ile Ile Thr Ala Ala Lys Arg Asp Leu Ala Leu

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Input Set : A:\224378.ST252.txt

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127	340	345	350	
129	gta aat gat cag ctg ctt ggc ttt gta agg gaa aga aca ctg gat aaa	1341		
130	Val Asn Asp Gln Leu Leu Gly Phe Val Arg Glu Arg Thr Leu Asp Lys			
131	355 360 365 370			
133	cgg tgg cga gta aga aaa gaa gct atg atg ggt ctg gct cag ctt tat	1389		
134	Arg Trp Arg Val Arg Lys Glu Ala Met Met Gly Leu Ala Gln Leu Tyr			
135	375 380 385			
137	aag aaa tac tgt ctt cat ggt gaa gca gga aag gaa gct gca gag aaa	1437		
138	Lys Lys Tyr Cys Leu His Gly Glu Ala Gly Lys Glu Ala Ala Glu Lys			
139	390 395 400			
141	gtc agc tgg ata aag gac aaa ctt ctg cat att tat tat cag aac agc	1485		
142	Val Ser Trp Ile Lys Asp Lys Leu Leu His Ile Tyr Tyr Gln Asn Ser			
143	405 410 415			
145	att gac gac aaa ctg ttg gta gag aaa atc ttt gct cag tat ctt gtc	1533		
146	Ile Asp Asp Lys Leu Leu Val Glu Lys Ile Phe Ala Gln Tyr Leu Val			
147	420 425 430			
149	ccc cac aac ctg gaa aca gaa gag aga atg aaa tgc tta tat tac tta	1581		
150	Pro His Asn Leu Glu Thr Glu Glu Arg Met Lys Cys Leu Tyr Tyr Leu			
151	435 440 445 450			
153	tat gct agt ttg gat cca aat gct gta aaa gct ctc aac gaa atg tgg	1629		
154	Tyr Ala Ser Leu Asp Pro Asn Ala Val Lys Ala Leu Asn Glu Met Trp			
155	455 460 465			
157	aag tgt cag aac atg ctt cgg agc cat gta cgc gaa cta ttg gat ttg	1677		
158	Lys Cys Gln Asn Met Leu Arg Ser His Val Arg Glu Leu Leu Asp Leu			
159	470 475 480			
161	cac aag cag cct aca tca gag gct aac tgt tct gcc atg ttt gga aaa	1725		
162	His Lys Gln Pro Thr Ser Glu Ala Asn Cys Ser Ala Met Phe Gly Lys			
163	485 490 495			
165	ctg atg acc ata gca aag aat ttg cct gac ccc ggg aaa gca caa gat	1773		
166	Leu Met Thr Ile Ala Lys Asn Leu Pro Asp Pro Gly Lys Ala Gln Asp			
167	500 505 510			
169	ttt gtg aag aaa ttt aac cag gtt ctc ggc gat gat gag aaa ctt cgg	1821		
170	Phe Val Lys Lys Phe Asn Gln Val Leu Gly Asp Asp Glu Lys Leu Arg			
171	515 520 525 530			
173	tct cag ttg gag tta tta att agc cca acc tgt tct tgc aaa caa gca	1869		
174	Ser Gln Leu Glu Leu Leu Ile Ser Pro Thr Cys Ser Cys Lys Gln Ala			
175	535 540 545			
177	gat att tgt gtg aga gaa ata gcc cgg aaa ctt gca aat cct aag caa	1917		
178	Asp Ile Cys Val Arg Glu Ile Ala Arg Lys Leu Ala Asn Pro Lys Gln			
179	550 555 560			
181	cca aca aat cct ttt cta gag atg gtc aaa ttt ctg ttg gaa aga atc	1965		
182	Pro Thr Asn Pro Phe Leu Glu Met Val Lys Phe Leu Leu Glu Arg Ile			
183	565 570 575			
185	gca cct gtg cac att gat tca gaa gcc ata agt gca cta gtg aaa ttg	2013		
186	Ala Pro Val His Ile Asp Ser Glu Ala Ile Ser Ala Leu Val Lys Leu			
187	580 585 590			
189	atg aat aag tca ata gag ggg aca gca gat gat gaa gag gag ggt gta	2061		
190	Met Asn Lys Ser Ile Glu Gly Thr Ala Asp Asp Glu Glu Glu Gly Val			
191	595 600 605 610			

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193 agt cca gat acā gct atc cgt tca gga ctt gaa ctt'ctt aag gtt ctg 2109
194 Ser Pro Asp Thr Ala Ile Arg Ser Gly Leu Glu Leu Leu Lys Val Leu
195 615 620 625
197 tct ttt aca cat cct acc tcg ttc cac tct gca gag aca tat gag tcc 2157
198 Ser Phe Thr His Pro Thr Ser Phe His Ser Ala Glu Thr Tyr Glu Ser
199 630 635 640
201 ttg tta cag tgc cta aga atg gag gat gac aag gta gca gaa gct gct 2205
202 Leu Leu Gln Cys Leu Arg Met Glu Asp Lys Val Ala Glu Ala Ala
203 645 650 655
205 att caa att ttt aga aat aca ggt cac aaa ata gaa aca gac ctt ccc 2253
206 Ile Gln Ile Phe Arg Asn Thr Gly His Lys Ile Glu Thr Asp Leu Pro
207 660 665 670
209 cag ata cga tcg acc tta att ccc att tta cat caa aaa gca aag agg 2301
210 Gln Ile Arg Ser Thr Leu Ile Pro Ile Leu His Gln Lys Ala Lys Arg
211 675 680 685 690
213 ggt act cca cac caa gca aaa cag gct gtg cac tgt ata cac gcc ata 2349
214 Gly Thr Pro His Gln Ala Lys Gln Ala Val His Cys Ile His Ala Ile
215 695 700 705
217 ttc aca aat aaa gaa gtc cag ctt gca cag att ttt gag cca ctc agt 2397
218 Phe Thr Asn Lys Glu Val Gln Leu Ala Gln Ile Phe Glu Pro Leu Ser
219 710 715 720
221 agg agt ctg aat gct gat gtg cca gaa caa ctt ata act cca tta gtt 2445
222 Arg Ser Leu Asn Ala Asp Val Pro Glu Gln Leu Ile Thr Pro Leu Val
223 725 730 735
225 tca ttg ggc cac att tct atg tta gca cca gat cag ttt gct tcc cca 2493
226 Ser Leu Gly His Ile Ser Met Leu Ala Pro Asp Gln Phe Ala Ser Pro
227 740 745 750
229 atg aaa tct gta gta gca aat ttt att gtg aaa gat ctg cta atg aat 2541
230 Met Lys Ser Val Val Ala Asn Phe Ile Val Lys Asp Leu Leu Met Asn
231 755 760 765 770
233 gac agg tca aca ggt gaa aag aat gga aaa ctg tgg tct cca gat gaa 2589
234 Asp Arg Ser Thr Gly Glu Lys Asn Gly Lys Leu Trp Ser Pro Asp Glu
235 775 780 785
237 gag gtt tcc cct gaa gta cta gca aag gta cag gca att aaa ctt ctg 2637
238 Glu Val Ser Pro Glu Val Leu Ala Lys Val Gln Ala Ile Lys Leu Leu
239 790 795 800
241 gta agg tgg ctg ttg ggt atg aaa aac aac cag tct aaa tct gcc aat 2685
242 Val Arg Trp Leu Leu Gly Met Lys Asn Asn Gln Ser Lys Ser Ala Asn
243 805 810 815
245 tca acc ctt cgg tta tta tca gcg atg ttg gtt agt gag ggt gac ctg 2733
246 Ser Thr Leu Arg Leu Leu Ser Ala Met Leu Val Ser Glu Gly Asp Leu
247 820 825 830
249 aca gag caa aag agg atc agt aaa tct gat atg tct cgc ttg cga tta 2781
250 Thr Glu Gln Lys Arg Ile Ser Lys Ser Asp Met Ser Arg Leu Arg Leu
251 835 840 845 850
253 gct gct ggt agt gcc ata atg aag ctt gct cag gaa cct tgt tac cat 2829
254 Ala Ala Gly Ser Ala Ile Met Lys Leu Ala Gln Glu Pro Cys Tyr His
255 855 860 865
257 gaa att att acc cca gaa cag ttt cag ctc tgt gca ctt gtt att aat 2877

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RAW SEQUENCE LISTING

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TIME: 10:39:26

Input Set : A:\224378.ST252.txt

Output Set: N:\CRF4\10272003\J679580.raw

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258 Glu Ile Ile Thr Pro Glu Gln Phe Gln Leu Cys Ala Leu Val Ile Asn
259      870      875      880
261 gat gag tgt tac caa gta agg cag ata ttt gct cag aag ctg cat aag 2925
262 Asp Glu Cys Tyr Gln Val Arg Gln Ile Phe Ala Gln Lys Leu His Lys
263      885      890      895
265 gca ctt gtg aag tta ctg ctc cca ttg gag tat atg gcg atc ttt gcc 2973
266 Ala Leu Val Lys Leu Leu Pro Leu Glu Tyr Met Ala Ile Phe Ala
267      900      905      910
269 ttg tgt gcc aaa gat cct gtg aag gag aga aga gca cac gca cga caa 3021
270 Leu Cys Ala Lys Asp Pro Val Lys Glu Arg Arg Ala His Ala Arg Gln
271 915      920      925      930
273 tgt tta ctg aaa aat atc agt ata cgc agg gaa tac att aag cag aat 3069
274 Cys Leu Leu Lys Asn Ile Ser Ile Arg Arg Glu Tyr Ile Lys Gln Asn
275      935      940      945
277 cct atg gct act gag aaa tta tta tca ctg ttg cct gaa tat gta gtt 3117
278 Pro Met Ala Thr Glu Lys Leu Leu Ser Leu Leu Pro Glu Tyr Val Val
279      950      955      960
281 cca tac atg att cac ctg cta gcc cat gat cca gat ttt aca aga tca 3165
282 Pro Tyr Met Ile His Leu Leu Ala His Asp Pro Asp Phe Thr Arg Ser
283      965      970      975
285 caa gat gtt gat cag ctt cgt gat atc aaa gag tgc cta tgg ttc atg 3213
286 Gln Asp Val Asp Gln Leu Arg Asp Ile Lys Glu Cys Leu Trp Phe Met
287      980      985      990
289 ctt gaa gtt tta atg aca aag aat gaa aac aat agc cat gcc ttt atg 3261
290 Leu Glu Val Leu Met Thr Lys Asn Glu Asn Asn Ser His Ala Phe Met
291 995      1000      1005      1010
293 aag aag atg gca gag aac atc aag tta acc aga gat gcc cag tct cca 3309
294 Lys Lys Met Ala Glu Asn Ile Lys Leu Thr Arg Asp Ala Gln Ser Pro
295      1015      1020      1025
297 gat gaa tcc aag aca aat gaa aaa ctg tat aca gta tgt gat gtg gct 3357
298 Asp Glu Ser Lys Thr Asn Glu Lys Leu Tyr Thr Val Cys Asp Val Ala
299      1030      1035      1040
301 ctc tgt gtt ata aat agt aaa agt gct ttg tgc aat gca gat tca cca 3405
302 Leu Cys Val Ile Asn Ser Lys Ser Ala Leu Cys Asn Ala Asp Ser Pro
303      1045      1050      1055
305 aag gac cca gtc ctc cca atg aaa ttt att aca caa cct gaa aag gac 3453
306 Lys Asp Pro Val Leu Pro Met Lys Phe Phe Thr Gln Pro Glu Lys Asp
307      1060      1065      1070
309 ttc tgt aac gat aag agt tat att tca gaa gag aca aga gta ctt ctg 3501
310 Phe Cys Asn Asp Lys Ser Tyr Ile Ser Glu Glu Thr Arg Val Leu Leu
311 1075      1080      1085      1090
313 tta aca gga aag cca aag cct gct gga gta cta ggt gca gta aat aag 3549
314 Leu Thr Gly Lys Pro Lys Pro Ala Gly Val Leu Gly Ala Val Asn Lys
315      1095      1100      1105
317 cct tta tca gca acg gga agg aaa ccc tat gtt aga agc act ggc act 3597
318 Pro Leu Ser Ala Thr Gly Arg Lys Pro Tyr Val Arg Ser Thr Gly Thr
319      1110      1115      1120
321 gag act gga agc aat att aat gta aat tca gag ctg aac cct tca acc 3645
322 Glu Thr Gly Ser Asn Ile Asn Val Asn Ser Glu Leu Asn Pro Ser Thr

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/679,580

DATE: 10/27/2003
TIME: 10:39:27

Input Set : A:\224378.ST252.txt
Output Set: N:\CRF4\10272003\J679580.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3

Use of <220> Feature(NEW RULES):

Sequence(s) are missing the <220> Feature and associated headings.

Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence"
or "Unknown". Please explain source of genetic material in <220> to <223>
section (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp.29631-32)
(Sec.1.823 of new Rules)

Seq#:3

10/679,580 7

<210> 3
<211> 20
<212> PRT
<213> Artificial
<400> 3

see p. 6 for error explanation

Lys Leu Gln Asp Leu Ala Lys Lys Ala Ala Pro Ala Glu Arg Gln Ile
1 5 10 15

Asp Leu Gln Arg
20

Page 8

VERIFICATION SUMMARY

DATE: 10/27/2003

PATENT APPLICATION: US/10/679,580

TIME: 10:39:27

Input Set : A:\224378.ST252.txt

Output Set: N:\CRF4\10272003\J679580.raw

11 M:270 C: Current Application Number differs, Replaced Current Application No
11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
710 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:3, <213>
ORGANISM:Artificial
710 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:3, <213>
ORGANISM:Artificial
710 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3, Line#:710